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ABSTRACT

This study replicates a previous study in order to reexamine the development of sex biases in middle childhood and adolescence. Four hundred public school students in grades 2, 4, 6, 8, and 10 (200 of each sex) assigned desirable and undesirable traits to girls and boys. Twenty-nine traits (15 desirable and 14 undesirable) were selected from the 33 traits used by Smith in 1939. Half the subjects had an additional neutral option of assigning traits to "both sexes." Children in all grades assigned more desirable traits to their own sex and more undesirable traits to the opposite sex, in line with Smith's findings. Both sexes became less positive toward the opposite sex with increasing age. This pattern also had characterized girls in Smith's study, whereas boys had shown the opposite pattern. Beginning in the sixth grade, girls were more apt than boys to assign desirable traits to their own sex. Availability of the "both sexes" option decreased stereotyping, especially in girls. (Author/CM)

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Development of Sex Biases in Children:

Forty Years Later

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Abstract

Children in grades 2 through 10 (200 of each sex) assigned desirable and undesirable traits to girls or boys. Half the subjects had an additional option of both sexes. Children in all grades assigned more desirable traits to their own sex and more undesirable traits to the opposite sex, in line with Smith (1939). Both sexes became less positive toward their own sex and more positive toward the opposite sex with increasing age. This pattern also had characterized girls in Smith's study, whereas boys had shown the opposite pattern. Beginning in the sixth grade, girls were more apt than boys to assign desirable traits to their own sex. Availability of the "both sexes" option decreased stereotyping, especially in girls.

Development of Sex Biases in Children:

Forty Years Later

In a study which still is cited frequently (e.g., Baruch & Barnett, 1975; O'Leary, 1977; Weitzman, 1979), Smith (1939) found that children between the ages of 8 and 14 years viewed their own sex more positively than the opposite sex. With increasing age, however, both sexes increasingly attributed desirable traits to boys and undesirable traits to girls. Despite extensive examination of sex-role stereotypes and preferences in the past few years, Smith's 40-year-old study of the development of sex biases appears not to have been replicated. Two recent studies (Silvern, 1977; Zalk & Katz, 1978) confirmed Smith's (1939) finding that children perceive their own sex more positively than the opposite sex. Neither study, however, examined the course of development of sex biases throughout middle-childhood and early adolescence, as Smith did. (Silvern's subjects were fourth and sixth graders; Zalk & Katz tested second and fifth graders). Does increasing devaluation of females during childhood still occur despite the more egalitarian social climate of recent years? In order to investigate this question, this study re-examined the development of sex biases in middle-childhood and adolescence. As in Smith's (1939) study, sex biases were assessed by asking children to attribute desirable and undesirable traits to girls or boys.

Researchers measuring sex-role stereotypes or preferences frequently have required subjects to ascribe traits either to males or to females. This forced-choice approach may yield an inflated impression of stereo-

typing or preference because there is no provision for traits to be ascribed equally to both sexes (see Brush, Gold, & Sprotzer, Note 1). While a few recent studies have provided a third alternative of "both sexes" or "same" along with the male and female options (e.g., Edelbrock & Sugawara, 1978; Silvern, 1977; Brush et al, Note 1; Urberg, Note 2), direct comparisons between the two-choice and three-choice approaches appear to be lacking. Thus, a second purpose of this study was to examine how children's attributions of traits to girls and boys are influenced by adding a neutral (i.e. "both sexes") option to the female and male options.

Method

Subjects

The subjects were 400 white middle-class public school students from the second, fourth, sixth, eighth, and tenth grades of a public school district in a small central Illinois city. Mean ages ranged from 7.7 to 15.6 years. Forty males and 40 females were tested at each grade level. The second, fourth, and sixth graders were drawn from three elementary schools. The eighth and tenth graders were drawn respectively from the one junior high school and the one high school which serve the school district.

Sex Bias Measure

Sex biases were measured by means of a questionnaire that tapped beliefs about the applicability of 29 traits -- 15 desirable and 14 undesirable -- to males and females (see Table 1). These traits were selected

Insert Table 1 about here

from the 33 traits used by Smith (1939). The desirability or undesirability of the traits had been determined by the unanimous agreement of 17 experienced teachers. Four desirable traits were eliminated because they either were synonyms or antonyms of other traits used in the study, and would have resulted in pairs of items with nearly identical wording. Two of these traits had been attributed to girls by both sexes in Smith's study, and two had been attributed to boys. Thus, the 15 desirable traits which were retained showed essentially the same ratio of overall "boy" to "girl" choices in Smith's study (8 to 7) as did the original set of 19 (10 to 9).

The format for presenting the traits was similar to that used by Smith (1939) as modified by Brush et al (Note 1). Each trait was elaborated by a sentence describing a behavior associated with the characteristic. Following each description, subjects were asked who was most likely to show the trait. Half the subjects were given two choices: girls or boys. Half were given three choices: girls, boy, or both sexes equally. The subject circled one of the two (or three) choices following each item. The following is a representative item:

Some children work hard. Who is like that? Do girls work harder, do boys work harder, or are they the same?

GIRLS

BOYS

SAME

The traits were listed in the same order used by Smith. The words "girl" and "boy" appeared first on alternating items. For each trait, the word "boy" appeared first in half the booklets, and the word "girl" appeared first in the other half. In the three-choice booklets, the word "same" always appeared last.

Procedure

The sex bias measure was administered as a paper and pencil questionnaire to all subjects. The experimenters, two female college students, read each question aloud for the second and fourth graders. The experimenters went over the instructions and two sample items with the sixth, eighth, and tenth graders, who then worked at their own pace.

At each elementary school, the second, fourth, and sixth graders were divided into two groups of approximately equal sex distribution at each grade level, with one group receiving the two-choice form of the questionnaire and the other receiving the three-choice form.

All eighth graders were tested together in a large assembly hall, as were all tenth graders. Again, half the students of each sex at each grade level were given the two-choice form and half were given the three-choice form.

Results

Dependent variables were: a) number of "girl" choices for desirable traits; b) number of "boy" choices for desirable traits; c) number of "same" choices for desirable traits; d) number of "girl" choices for undesirable traits; e) number of "boy" choices for undesirable traits; f) number of "same" choices for undesirable traits. These scores are presented in Tables 2 and 3, along with comparable data from Smith's (1939) study.

Insert Tables 2 and 3 about here

Separate 2 (sex) x 5 (grade) x 2 (number of choices: two vs. three) analyses of variance were performed for each of these variables. (The "number of choices" factor was eliminated when analyzing the two variables involv-

ing "same" choices, since these were present only in the three-choice condition.) Comparisons among means for significant main effects and interactions were made with Tukey's HSD test. Results of the analyses of variance are summarized in Table 4.

Insert Table 4 about here

Main Effect of Sex

All six analyses yielded a significant main effect of sex. Males attributed desirable traits to boys more than did girls, while females attributed desirable traits to girls more than did boys. Similarly, females assigned undesirable traits to boys more than did males, whereas males assigned undesirable traits to girls more than did females. Finally, females judged more traits--both desirable and undesirable--to be equally characteristic of both sexes than did males.

Main Effect of Grade

Second graders attributed more desirable traits to boys than did children in all other grades. Eighth graders assigned more desirable traits to girls than did younger children. Tenth graders attributed more undesirable traits to girls than did fourth graders. Sixth graders judged that more traits, desirable as well as undesirable, were equally characteristic of both sexes than did children in grades 8 and 10.

Interaction of Sex and Grade

Males attributed more desirable traits to boys than did females at every grade level. Males assigned progressively fewer desirable traits to boys with age, however, whereas females' assignment of desirable traits to boys remained the same through the eighth grade, and increased in the tenth

grade.

Females assigned more desirable traits to girls than did males in all grades. With increasing age, however, females attributed progressively fewer desirable traits to girls. (Eighth grade females were an exception to this pattern). Males, on the other hand, increasingly attributed desirable traits to girls with increasing age.

Females chose boys for undesirable traits more often than did males at every grade level except the tenth. As they got older, males assigned more undesirable traits to boys, while females (with the exception of eighth graders) assigned fewer.

Males in all grades attributed more undesirable traits to girls than did females. Older females assigned more undesirable traits to girls than did younger ones, however. Males assigned progressively fewer undesirable traits to girls from the second through the sixth grades, but reversed this pattern in the eighth and tenth grades.

Main Effect of Number of Choices

Less stereotyping was shown when a neutral ("both sexes") option was available. For both desirable and undesirable traits, fewer "girl" and "boy" choices were made in the three-choice than in the two-choice condition.

Interaction of Sex and Number of Choices

In both the two-choice and three-choice conditions, females assigned fewer desirable traits to boys and more desirable traits to girls than did males. Females attributed more undesirable traits to boys than did males in the two-choice condition, but not in the three-choice condition.

Interaction of Grade and Number of Choices

In the two-choice condition, more desirable traits were assigned to boys by second, fourth, and sixth graders than by eighth graders. In the three-choice condition, second graders assigned more desirable traits to boys than did children in all other grades.

Attribution of desirable traits to girls was greater among eighth graders than among second graders in the two-choice condition and was greater among eighth and tenth graders than among sixth graders in the three-choice condition.

In the two-choice condition, eighth graders assigned fewer undesirable traits to girls than did children in all other grades. In the three-choice condition, however, fourth and sixth graders attributed fewer undesirable traits to girls than did eighth and tenth graders.

Present Findings Compared With Those of Smith

The mean number of "girl" and "boy" choices for desirable and undesirable traits made by females and males at each grade level in the two-choice condition were compared with Smith's scores by means of two-tailed t-tests (see Table 2 for means). The forced-choice format results in equal variances for the distributions of "boy" choices and "girl" choices made by a given sex at a given grade for a given type of trait (i.e., desirable or undesirable). Since the resulting t-values for comparisons of number of "boy" choices in the two studies must equal the corresponding t-values for comparisons of number of "girl" choices, only one value is reported below for each pair of "boy" and "girl" comparisons.

At each grade level females in the present study assigned more desirable traits to girls and fewer desirable traits to boys than did females in

Smith's study, $t_s(19) = 2.15, p < .05$; $3.12, p < .01$, $3.89, p < .01$; and $14.28, p < .01$, for second, fourth, sixth, and eighth graders, respectively. Second and eighth grade females in the present study also attributed fewer undesirable traits to girls and more undesirable traits to boys than did the corresponding subjects in Smith's study, $t_s(19) = 2.41, p < .05$; and $6.98, p < .01$, for second and eighth graders.

Second and fourth grade males in the present study attributed more desirable traits to girls and fewer desirable traits to boys than did Smith's male subjects, $t_s(19) = 6.29, p < .01$; and $3.51, p < .01$, for second and fourth graders. For eighth grade boys in the two studies, however, this pattern was reversed, $t(19) = 3.51, p < .01$. Finally, second grade males in the present study, as compared to Smith's, assigned more undesirable traits to girls and fewer undesirable traits to boys, $t(19) = 4.48, p < .01$, while eighth grade boys again showed the opposite pattern, $t(19) = 5.04, p < .01$.

Desirable Traits: Females' Choice of "Girls" vs. Males' Choice of "Boys"

Silvern (1977) reported that girls judged traits which they assigned to the feminine sex role to be more desirable than boys judged traits which they assigned to the masculine role. In order to test for a similar sex difference in the present data, the mean number of times females chose "girls" and males chose "boys" for desirable traits was compared by means of one-tailed t -tests for the two-choice and the three-choice conditions at each grade level. (See Table 2 for means.) In the three-choice condition, girls and boys in all grades chose their own sex equally often for desirable traits. In the two-choice condition, second and fourth grade females and males also did not

differ in the frequency of making same-sex choices. In the sixth, eighth and tenth grades, however, females attributed desirable traits to their own sex more often than boys did to theirs, $t_s(38) = 1.86, p < .05$; $10.10, p < .005$; and $2.70, p < .01$, respectively. These results are consistent with Silvern's findings.¹

Discussion

The major purpose of the present study was to examine the development of sex biases in a sample of contemporary children. Girls and boys in the second through the tenth grades were found to attribute more desirable traits to their own sex and more undesirable traits to the opposite sex, consistent with both older (Smith, 1939) and more recent (Silvern, 1977; Zalk & Katz, 1978) findings. Also in line with earlier (Smith, 1939) and more contemporary (Zalk & Katz, 1978) results, girls showed a progressively better opinion of boys with increasing age. The boys in Smith's study similarly became more positive toward boys and more negative toward girls over age. The boys in the present study, however, responded much like the girls in showing increasingly negative evaluations of their own sex and increasingly positive evaluations of the opposite sex with age.

Why were older children of both sexes more negative about their own sex and more favorable toward the opposite sex than were their younger counterparts? One possible explanation is that young children may attribute socially desirable traits to themselves (and their gender), and that this response bias may decline with age as children develop a more differentiated cognitive maturity and a more realistic conception of themselves and their world. This developmental view is not entirely satisfactory, however, for

it fails to explain why the boys in Smith's study became more positive toward their own sex with increasing age, rather than less. The discrepant findings for the boys in the two studies may reflect an historical change in the social climate in which children are growing up. The contemporary movement toward equality between the sexes has led to a de-emphasis on traditional sex-role stereotyping and has made it acceptable, perhaps even desirable, to express positive views about females. Such changes in social attitudes also help to explain why the girls in the present study were relatively more positive about their own gender than were either their male counterparts or the girls studied 40 years ago. The change toward egalitarianism also can account for the lesser degree of sex-typing for desirable traits shown by the present subjects as compared to Smith's. As seen in Table 1, six of the traits which were sex-typed in Smith's study--three feminine and three masculine--were sex-neutral in the present study. (There was no change in the overall degree of sex-typing of undesirable traits in the two studies.)

The second purpose of the study was to examine how children's attributions of traits to girls and boys are influenced by adding a neutral (i.e., both sexes) option to the female and male options. In line with the findings of Brush et al (Note 1), girls showed less stereotyping than boys when given the opportunity to attribute traits equally to both sexes. These findings are consistent with evidence that girls are subjected to less pressure to conform to traditional sex stereotypes than are boys (Fling & Manosevitz, 1972; Lansky, 1967). Both sexes, however, displayed

less stereotyping when the "neutral" option was available. Given the current egalitarian atmosphere, this finding may to some extent reflect a tendency to respond in a manner deemed socially acceptable. Alternatively, it may indicate that research which requires subjects to choose between the sexes may yield inflated estimates of the actual extent of stereotyping.

Reference Notes

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2. Urberg, K. A. The development of androgynous sex-role concepts in young children. Paper presented at the meeting of the Society for Research in Child Development San Francisco, March 1979.

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Footnote

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¹The authors examined the possibility that this finding might be an artifact of including relatively more undesirable traits that are sex-typed as masculine than as feminine and relatively more desirable traits that are sex-typed as feminine than as masculine. The criterion of sex-typing employed was assignment of a trait to a particular sex by at least 60 percent of the subjects of each sex (see Silvern, 1977; Williams, Bennett, & Best, 1975.) As shown in Table 1, an equal number of desirable traits--five--were sex-typed as masculine and as feminine in the present study. Of the few undesirable traits which were sex-typed, two were typed as feminine and one as masculine. Thus, there was no tendency to assign either more desirable traits or more undesirable traits to one sex than to the other.

Table 1

Percentage of Subjects Assigning Desirable and Undesirable
 Traits to Girls and Boys: Two-Choice Condition (Data
 derived from Smith, 1939, are in parentheses)

Trait	Female Subjects		Male Subjects		Sex Typing ^a
	Girls	Boys	Girls	Boys	
Desirable					
Kind to animals	97(86)	03(14)	67(65)	33(35)	F(F)
Do things for others	87(74)	13(26)	38(39)	62(61)	O(O)
Do right unobserved	90(89)	10(11)	58(63)	42(37)	O(F)
Quick in movement	16(18)	84(82)	08(07)	92(93)	M(M)
Memory for stories	79(60)	21(40)	48(39)	52(61)	O(O)
Hard workers	63(41)	37(59)	26(14)	74(86)	O(O)
Friendly	91(87)	09(13)	59(55)	41(45)	O(O)
Stick to hard job	49(31)	51(69)	14(10)	86(90)	O(M)
Keep secrets	67(62)	33(38)	39(32)	61(68)	O(O)
Best leaders	67(35)	33(65)	13(15)	87(85)	O(M)
Nice to small children	95(98)	05(02)	73(85)	27(15)	F(F)
Good losers	77(55)	23(45)	49(42)	51(58)	O(O)
Truthful	90(90)	10(10)	57(70)	43(30)	O(F)
Puzzle solvers	73(37)	27(63)	35(21)	65(79)	O(M)
Bright in school	82(88)	18(12)	49(63)	51(37)	O(F)

(continued on next page)

Table 1 (continued)

Trait	Female Subjects		Male Subjects		Sex Typing ^a
	Girls	Boys	Girls	Boys	
Undesirable					
Cry when hurt	94(98)	06(02)	93(97)	07(03)	F(F)
Bossy	32(42)	68(58)	49(43)	51(57)	O(O)
Tire easily	79(55)	21(05)	89(94)	11(06)	F(F)
Quick to anger	14(41)	86(59)	57(40)	63(60)	M(O)
Afraid of strangers	97(97)	03(03)	95(95)	05(05)	F(F)
Mean to strange dogs	08(11)	92(89)	24(26)	76(74)	M(M)
Quarrelsome	44(40)	56(60)	45(48)	55(52)	O(O)
Easily frightened	96(97)	04(03)	97(99)	03(01)	F(F)
Selfish	31(31)	69(69)	66(54)	34(46)	O(O)
Like to tease	10(03)	90(97)	25(19)	75(81)	M(M)
Mean remarks	03(24)	97(76)	16(33)	84(67)	M(M)
Destroy property	15(01)	85(99)	42(06)	58(94)	O(M)
Likely to cheat	17(15)	33(85)	36(23)	64(77)	M(M)
Afraid of the dark	82(95)	18(05)	91(98)	09(02)	F(F)

^aCriterion for sex typing was assignment of a trait to a particular sex by at least 60% of subjects of each sex. M = masculine sex typing; F = feminine sex typing; O = no sex typing.

Table 2

Mean Number of "Girl" and "Boy" Choices for Desirable and Undesirable Traits:
Two-Choice Condition (Data derived from Smith, 1939, are in parentheses)

Type of Trait, and Choice	<u>Female Subjects</u>					<u>Male Subjects</u>				
	<u>Grade</u>					<u>Grade</u>				
	2	4	6	8	10	2	4	6	8	10
Desirable										
"Girl"	11.40 (10.22)	11.25 (9.63)	11.00 (8.61)	12.75 (8.51)	9.75	3.00 (6.72)	4.35 (6.35)	5.60 (5.78)	7.15 (5.66)	7.55
"Boy"	3.60 (4.79)	3.75 (5.37)	4.00 (6.39)	2.25 (6.50)	5.25	12.00 (8.28)	10.65 (8.66)	9.40 (9.23)	7.85 (9.35)	7.45
Undesirable										
"Girl"	5.05 (5.80)	6.15 (6.22)	6.90 (7.42)	5.55 (8.12)	7.20	9.90 (6.99)	8.15 (7.39)	7.90 (8.06)	7.00 (8.72)	7.85
"Boy"	8.95 (8.20)	7.85 (7.78)	7.10 (6.58)	8.45 (5.88)	6.80	4.10 (7.01)	5.85 (6.61)	6.10 (5.94)	7.00 (5.28)	6.15

Note.- Smith's (1939) data were reported as proportions rather than as means, and his study included 19 desirable traits as compared to 15 in this study. (Both used 14 undesirable traits.) For purposes of comparison with the present data, Smith's proportions of desirable and undesirable choices were multiplied by 15 and 14, respectively.

Table 3

Mean Number of "Girl," "Boy," and "Same" Choices for Desirable and Undesirable Traits: Three-Choice Condition

Type of Trait, and Choice	<u>Female Subjects</u>					<u>Male Subjects</u>				
	<u>Grade</u>					<u>Grade</u>				
	2	4	6	8	10	2	4	6	8	10
Desirable										
"Girl"	7.20	5.25	3.70	5.05	4.65	1.35	2.65	2.60	4.25	5.10
"Boy"	1.20	1.40	.90	.95	1.65	7.60	4.50	3.25	4.90	4.30
"Same"	6.60	8.35	10.40	8.90	8.70	6.05	7.90	9.10	5.55	5.55
Undesirable										
"Girl"	1.30	2.20	2.45	3.90	3.85	6.15	4.15	4.05	5.60	5.85
"Boy"	6.60	5.45	3.75	4.30	3.95	2.75	3.50	3.40	4.55	5.00
"Same"	6.10	6.35	7.80	5.80	6.20	5.05	6.35	6.50	3.85	3.15

Table 4

Summary of Results of Analyses of Variance for the Six Dependent Variables

Source	df	Dependent Variable					
		Desirable "Boy" ^a	Desirable "Girl" ^a	Desirable "Same" ^b	Undesir. "Boy" ^a	Undesir. "Girl" ^a	Undesir. "Same" ^b
Sex (S)	1	367.31***	217.68***	12.26***	48.75***	117.36***	10.91***
Grade (G)	4	8.74***	6.46***	5.41***	2.25	2.95**	4.40**
Choices (C)	1	214.37***	255.27***	-	140.22***	249.50***	-
S X G	4	11.20***	14.94***	1.55	14.16***	10.91***	1.29
S X C	1	15.92***	45.26***	-	5.79**	1.17	-
G X C	4	3.09**	2.40*	-	1.78	5.90***	-
S X G X C	4	2.29	.55	-	.56	.40	-

a Error df = 380

b Error df = 190

* $p < .05$ ** $p < .02$ *** $p < .001$